



MRT news

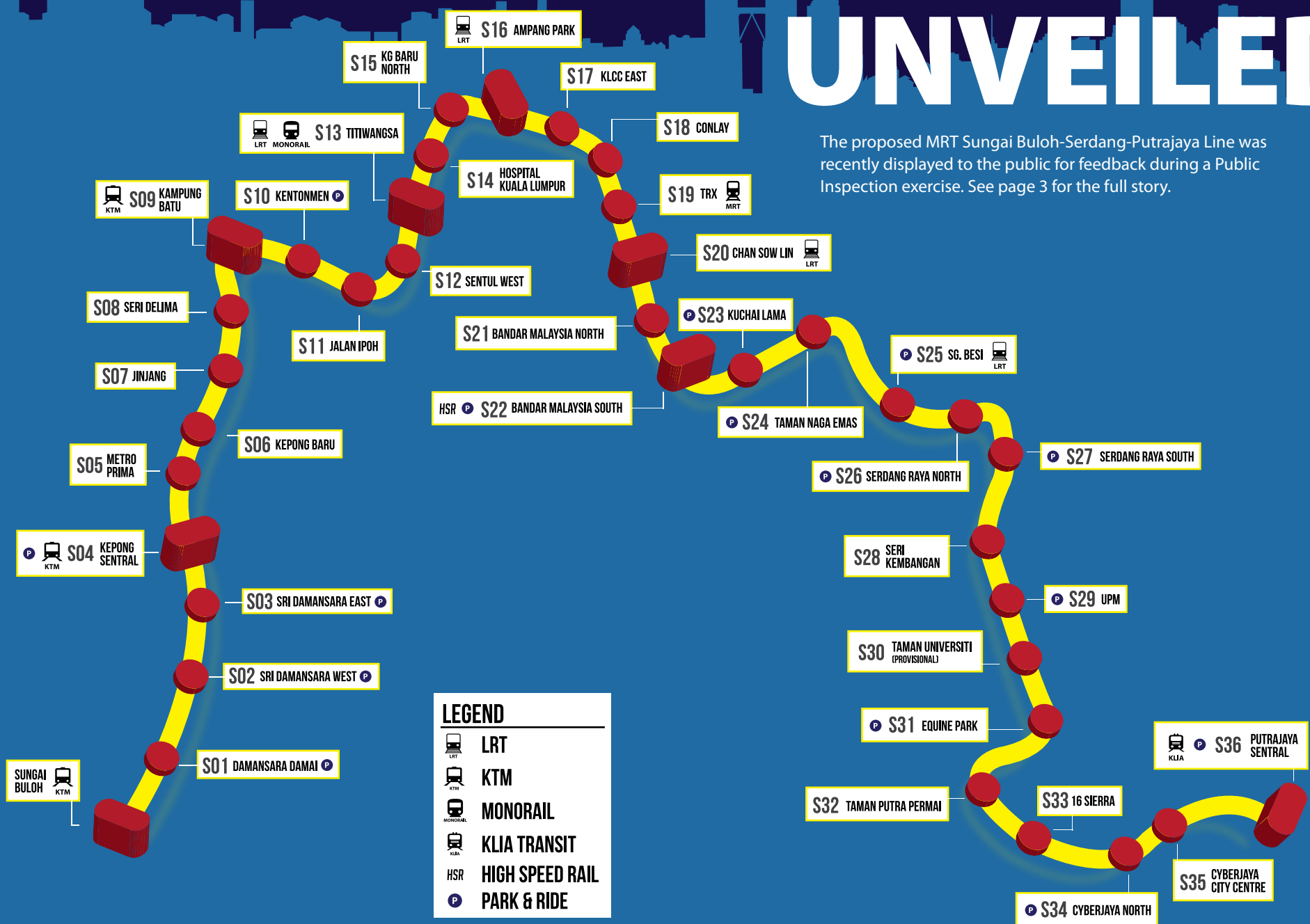
newsletter of the MRT project

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SSP LINE UNVEILED

The proposed MRT Sungai Buloh-Serdang-Putrajaya Line was recently displayed to the public for feedback during a Public Inspection exercise. See page 3 for the full story.



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Tunnelling for SBK Line completed





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from the desk of the CEO
DATO' SRI SHAHRIL MOKHTAR

END OF THE TUNNEL REACHED

WELCOME to this edition of MRT News.

I would like to take this opportunity to share that since the last edition of our newsletter, we have achieved one of the most important milestones in the construction of the MRT Sungai Buloh-Kajang Line (SBK Line) – the completion of all tunnel excavation work for the line's 9.5km underground alignment.

Needless to say, I am extremely proud of this significant achievement.

On 30 May 2013, the first tunnel boring machine (TBM) for this Project was launched by Prime Minister Dato' Sri Najib Tun Abdul Razak at the Cochrane Launch Shaft. Just short of two years after that date on 11 April 2015, the same TBM performed the final breakthrough at the Pasar Seni MRT Station site.

The article on Page 8 will give you a good idea on what it took for us to reach the end of the tunnel, literally. Indeed, the completion of tunnel excavation was extremely meaningful to us at Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) and also to our Underground Works Contractor MMC Gamuda KVMRT (T) Sdn Bhd.

It was on this Project that the world's first Variable Density TBM was put to work. The design of this new TBM was the result of the cooperation between MMC Gamuda and Herrenknecht AG, a renowned TBM manufacturer. Judging from the reduced incidence of sinkhole formation when tunnelling was being carried out, this new TBM performed extremely well.

Overall, the SBK Line is doing well and was 65.02% complete as at 30 June 2015. The construction of the Elevated Works, which includes System Works, was at 56.5% while the Underground Works Section was at 79.1%.

For the Elevated Works, we can see most of our elevated stations are now getting their roofs installed, architectural work done and equipment fitted in.

Under the System Works, track laying for the main line on the MRT guideway is progressing very well. At our Sungai Buloh Depot, 10 train sets have been delivered and were undergoing dynamic testing as at the end of June.

While tunnel excavation has been completed for the Underground Works Package, underground station work is still in progress. As at the end of June, excavation of all stations except for the Bukit Bintang MRT Station has been completed.

The other exciting development is of course the start of the Public Inspection for the MRT Sungai Buloh-Serdang-Putrajaya Line (SSP Line) – the topic of this edition's cover story.

During the three-month Public Inspection exercise which began on 15 May 2015, we displayed the proposed alignment and other information about the SSP Line for members of the public to give their feedback. To date, this is the most tangible sign that construction of the Klang Valley MRT Project's second line is certainly on the way.

Once the Public Inspection exercise is completed in August, the Government will have to approve the final alignment of the SSP Line before construction can begin. I expect work to start by the second quarter of next year.

I am certainly looking forward to this as we strive to give the Klang Valley an efficient and modern public transport system.

Thank you.

Shahril



DID YOU KNOW THAT ...

ONE of the oldest railway bridges in Malaysia is the Victoria Bridge in Karai, Perak, over the Perak River. The steel truss bridge was opened in 1900 and in use until 2002, when it was replaced by a new bridge built nearby to accommodate the double tracking and electrification of the West Coast Main Line.



Picture courtesy of Ong Wee Kit (Flickr)

GETTING READY FOR THE SSP LINE

By Nik Haizan Nik Zambrî

WITH the construction of the first line of the Klang Valley MRT Project over 65% complete, the Government has decided to proceed with developing the second MRT line, the Sungai Buloh-Serdang-Putrajaya Line (SSP Line).

To kick-start the development of the line, the proposed alignment of the SSP Line was displayed for Public Inspection by Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) from 15 May 2015 to 17 August 2015.

This is to fulfill the requirement of the Land Public Transport Act 2010 where the plans, sections and book of reference of a proposed railway has to be displayed to the public for them to give feedback and lodge objections.

The corridor of the proposed SSP Line runs from Sungai Buloh to Putrajaya, via Sri Damansara, Kepong, Batu, Jalan Sultan Azlan Shah, Jalan Tun Razak, KLCC, Tun Razak Exchange, the future Bandar Malaysia, Kuchai Lama, Sungai Besi, Seri Kembangan and Cyberjaya.

An estimated two million people live in this corridor and is expected to benefit from the development of the SSP Line.

It has a total length of 52.2km, of which 13.5km will be underground. There will be 36 stations, 11 of them underground, 24 elevated and one “half sunken” – built on the ground but beneath road level.

There is planned interconnectivity with the existing KTM Komuter (at three stations), LRT Ampang Line (three stations), LRT Kelana Jaya Line (one station), KL Monorail (one station), KLIA Transit (one station) and the Sungai Buloh MRT Line (two stations) to enable commuters to transfer to other services seamlessly.

One station is also planned to interconnect with the future Kuala Lumpur-Singapore High Speed Rail service.

Once fully operational in the second quarter of 2022, the SSP Line is expected to have a ridership of 529,000 passengers per day.

Construction of the SSP Line is expected to begin in the second quarter of 2016. This can only take place after the proposed alignment is finalised, detailed design done and contracts awarded.

The process for the proposed alignment to be approved involves MRT Corp handing over to the Suruhanjaya Pengangkutan Awam Darat (SPAD) all feedback and objections to the proposed SSP Line obtained during the three-month Public Inspection period.

SPAD will then analyse the feedback and objections and propose to the Government to make modifications to the proposed alignment. Once this is done and the Government is happy with the changes, it will approve the modified alignment as the final alignment.

The approval of the final alignment of the SSP Line is expected by the end of 2015.

Apart from gathering feedback from the public, MRT Corp also wanted the Public Inspection exercise to be a platform to create awareness among the public on the benefits of the MRT and especially the SSP Line.

Encik Mahmood Abdul Razak who was then MRT Corp Director of Strategic Communications and Public Relations said with the increased number of vehicles on the road every year, it is important for the Klang Valley to have good public transport to ensure efficient mobility for the city dwellers.

“By building the second MRT Line, the Klang Valley is closer to having good urban rail as the backbone of its public transportation system,” he said.

To ensure as many people could access the Public Inspection, MRT Corp organised a roadshow where booths were opened at a total of 24 locations along the proposed alignment at high-traffic areas such as shopping malls, community halls, a hospital and local councils.

The booths featured information about the SSP Line including a 6m satellite image of the proposed alignment. Visitors also got a 360 degree bird’s eye view of the alignment by using an interactive “hawkeye” application.

All information available at the booths were also available on the MRT Project website. Visitors accessing the information online could also put in their feedback conveniently via an online survey.



BUSY • View of the Public Inspection booth at Quill City Mall in Kuala Lumpur.



A CLOSER LOOK • MRT Corp CEO Dato' Sri Shahril Mokhtar (middle), Director of Stakeholder Relations and Land Management Encik Haris Fadzilah Hassan (right), Project Director of SSP Line Encik Aminuddin Maaris (left) and former Director of Strategic Communications and Public Relations Encik Mahmood Abdul Razak (behind) looking at the proposed alignment of the SSP Line.

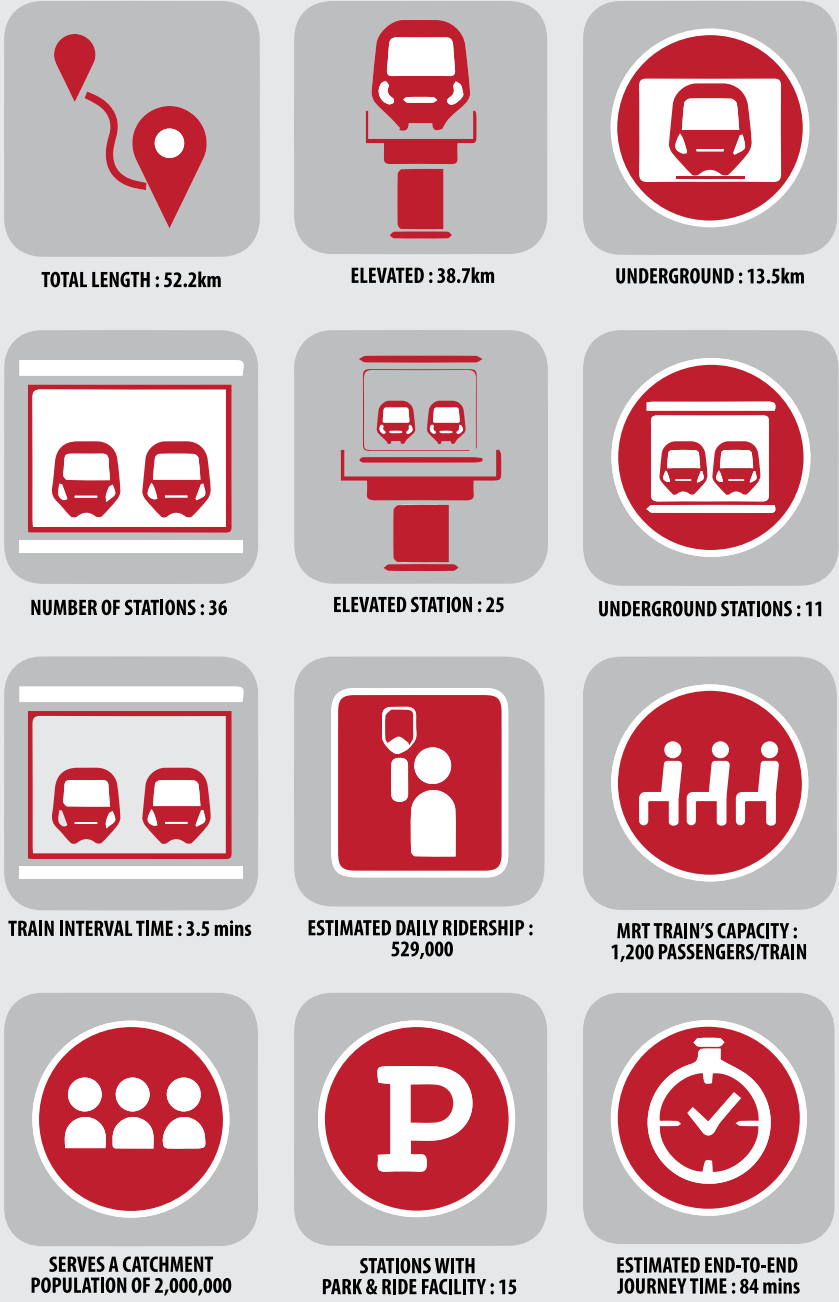


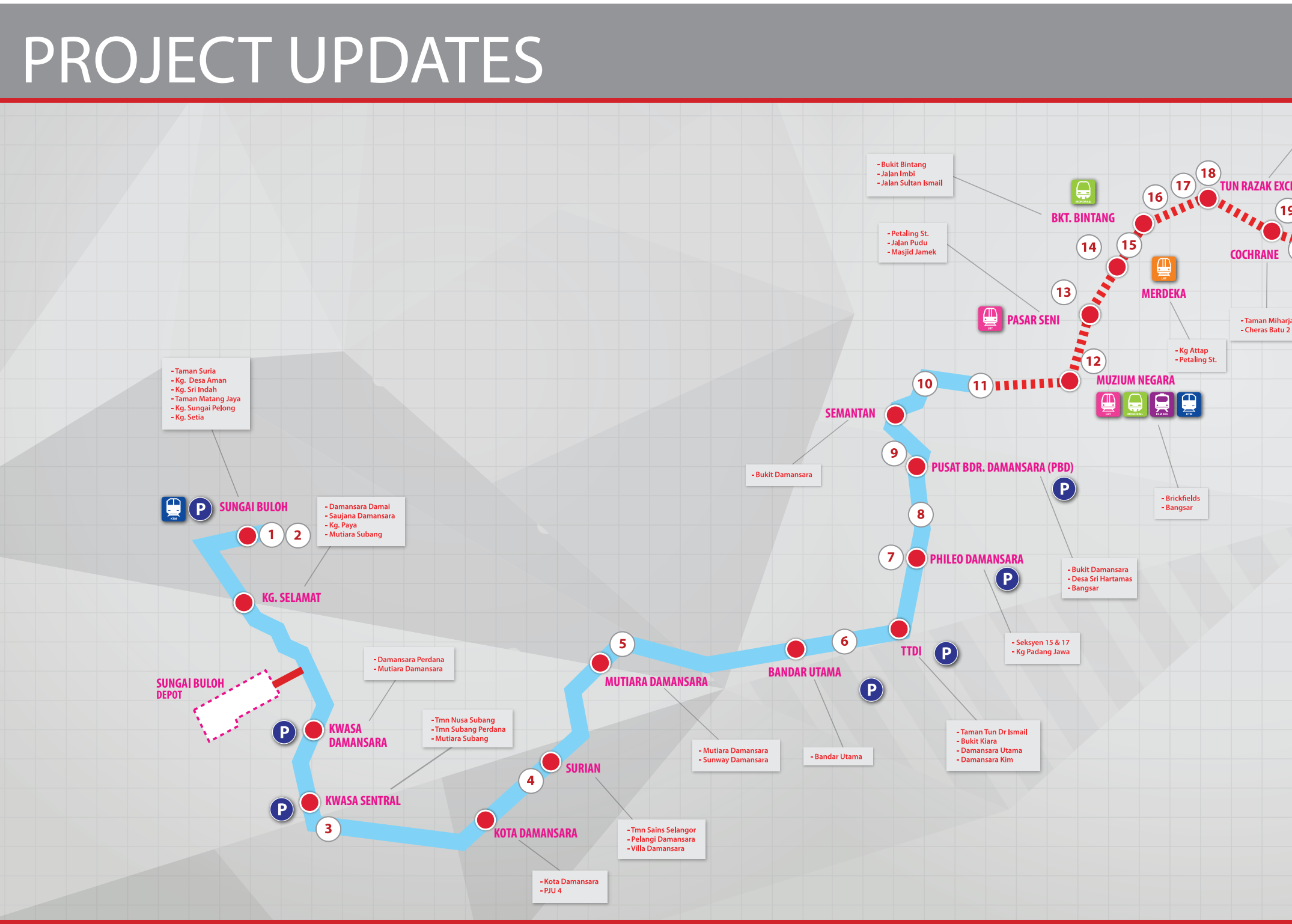
ALL EARS • MRT Information Officer Cik Fadhlin Sakina Abdul Malek explaining to the visitors about the SSP Line at Majlis Perbandaran Sepang.



GIVING INPUT • Members of the public putting in their feedback on the proposed SSP Line.

FACTS & FIGURES





1
GOOD MOMENTUM
View of the construction of the Sungai Buloh MRT Station, with part of the common concourse being built over and beside the KTM tracks.



2
ALMOST READY
The almost-completed Sungai Buloh Multi Storey "Park and Ride".



3
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Construction of the Kwaasa Damansara Station in progress in the former Rubber Research Institute (RRI).



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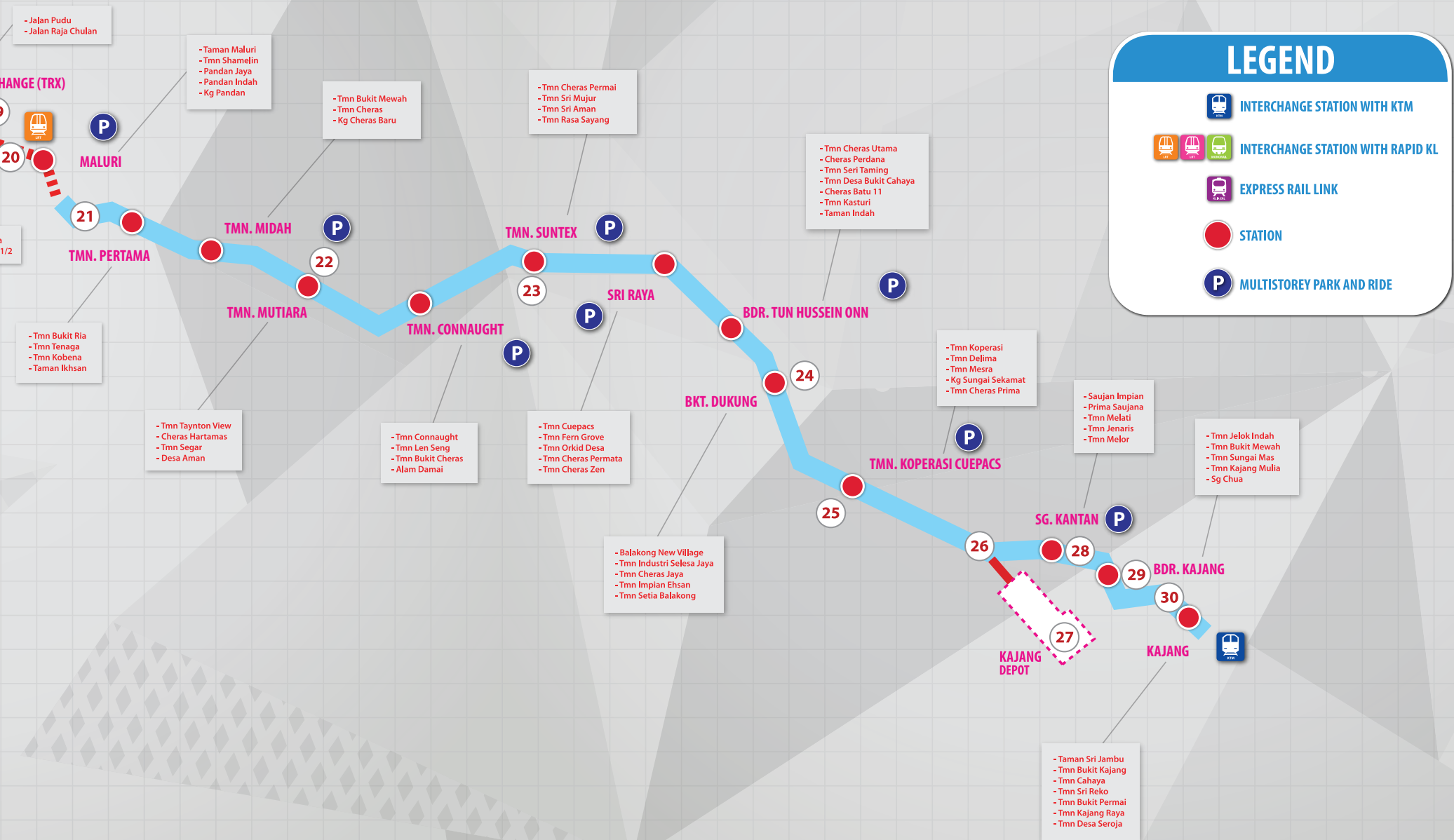
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Construction of the Bukit Dukong Station and track laying work in progress.



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LONG SPAN

The special span of the MRT guideway over the LDP near Taman Tun Dr Ismail taking shape.



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IN PROGRESS

Aerial view of the Phileo Damansara Station under construction. The construction on the left is for the multi-storey park and ride facility.



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NEXT STAGE OF WORKS

Preparation for trackworks being carried out on the completed MRT Guideway along the SPRINT Highway near the Kiara Interchange.



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The completed guideway along the SPRINT Highway near Medan Damansara with sound barriers being constructed.



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A launch gantry constructing the MRT guideway along Jalan Semantan.



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Excavation in progress at the Base Level of the Bukit Bintang MRT Station, with the North-bound tunnel opening at the back.



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Excavation to create adits from the Intervention Shaft No 2 at Bukit Bintang to the north-bound tunnel in progress.



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View of the northern end of the Tun Razak Exchange station box, with a completed portion of the Upper Plant Room Slab (white slab).



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Interior walls being constructed at the Concourse Level of the Cochrane Station.



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BIG CHAMBER

View of the track crossover area of the Maluri MRT Station box.



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View of the completed MRT guideway for the main line (left) along the Cheras-Kajang Highway and the spur line into the Kajang Depot (right).



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VAST SITE

Aerial view of the Kajang Depot.



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The Sungai Kantan Station under construction.



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CROSSING OVER

Aerial view of the completed MRT guideway over KTM railway tracks and the Langat River in Kajang.

BOTSWANA VICE-PRESIDENT VISITS COCHRANE MRT STATION

By Nik Haizan Nik Zambri

THE Klang Valley MRT Project hosted Botswana Vice-President Mr Mokgweetsi Masisi at the Cochrane MRT Station site on Wednesday, 8 April 2015.

His visit to the Project was part of his working visit to Malaysia from 7 April 2015 to 11 April 2015.

He led a delegation of 15 members which included the Minister of Presidential Affairs and Public Administration Mr Eric Molale.

Also present was Encik Azharuddin Mat Sah who was then PEMANDU's Director of Urban Public Transport NKRA and Greater Kuala Lumpur/ Klang Valley NKEA.

The delegation arrived at the site at 2.30pm and was welcomed by then Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) Director of Strategic Communications and Public Relations Encik Mahmood Abdul Razak. This was followed with a brief introduction of the Project.

The delegation then proceeded to the viewing deck at the station which overlooked the entire site.

They next entered the underground station, where they were given a presentation by MRT Corp Director of the Underground Stations Mr Keith Allenby. He explained in detail the construction progress of the station and the work that was currently taking place at the site.

The station box, which is 33 metres deep, was the first to be excavated for the MRT Sungai Buloh-Kajang Line and was used as the launch shaft for four tunnel boring machines.

Masisi said he was impressed with Project. He was also keen to learn more from Pemandu's Government Transformation Programme and Economic Transformation Programme.

The visit ended with both parties exchanging mementos and a photography session.



OVERALL VIEW • The delegation at the viewing deck looking over the Cochrane Station construction.



IN DETAIL • Assistant General Manager of Underground Tunnel Mr Peter Barnett (right) giving Masisi an explanation about the tunnelling process.

HIGH LEVEL ENGAGEMENTS FOR THE SSP LINE

By Wallace Soh Chun Hwei

A SERIES of engagement sessions with Members of Parliament, State Assemblymen and also Local Councillors was organised to introduce the proposed MRT Sungai Buloh-Serdang-Putrajaya Line.

The MPs, Assemblymen and Councillors engaged were from areas in the Klang Valley where the proposed alignment of SSP Line would run.

The engagement sessions were held ahead of the Public Inspection exercise for the line, which began in May 2015.

The Public Inspection is a mandatory process in the development of a railway line required under the Land Public Transport Act 2010, and involves information about a proposed railway being displayed for public feedback for three months.

The sessions kicked off with a town-hall style engagement on 27 March 2015, which was attended by Kepong MP Dr Tan Seng Giaw, Selayang MP Mr William Leong and Batu MP Mr Tian Chua. Several Local Councillors were also present.

Hosted by Mass Rapid Transit Corporation Sdn Bhd Chief Executive Officer Dato' Sri Shahril Mokhtar, those present were then briefed on the proposed SSP Line by Project Director, SSP Line Encik Amiruddin Ma'aris.

The SSP Line Project Delivery Partner, MMC Gamuda KVMRT (PDP SSP) Sdn Bhd, was also represented.

In his welcoming speech, Shahril reiterated

MRT Corp's commitment in engaging with the relevant people's representatives as well as other stakeholders and the general public in line with the company's core principle of openness, transparency, inclusiveness and collaboration.

Apart from the townhall, MRT Corp has also engaged MPs and Assemblymen on a one-to-one basis.

Those engaged included Titiwangsa MP Datuk Johari Abdul Ghani, Serdang MP Dr Ong Kian Ming, Seputeh MP Ms Teresa Kok, Petaling Jaya Utara MP Mr Tony Pua, Bukit Lanjan Assemblyman Ms Elizabeth Wong, Seri Kembangan Assemblyman Mr Ean Yong Hian Wah, and Seri Serdang Assemblyman Puan Noor Hanim Ismail.

Separate sessions were also held with the Councillors from the Petaling Jaya City Council (MBPJ), Selayang Municipal Council (MPS), Kuala Lumpur City Hall (DBKL), Subang Jaya Municipal Council (MPSJ), Sepang Municipal Council (MP Sepang) and the Putrajaya Corporation (PPJ).

MRT Corp's Director of Stakeholder Relations and Land Management Encik Haris Fadzilah Hassan said MPs and Assemblymen played an important role in bridging the gap between MRT Corp and the public.

"Hence, before we even start with the Public Inspection, we wanted to engage with them first. Their feedback and concerns are also very important to us as we anticipate public reaction to the proposed alignment," he said.



INTRODUCTION • MRT Corp Director of Strategic Communications and Public Relations Encik Mahmood Abdul Razak briefing those present.



GOOD SESSION • Photography session to end the successful engagement.



DIRECT ENGAGEMENT • MRT Corp Dato' Sri Shahril Mokhtar addressing the MPs and Assemblymen.



POINT OF VIEW • Selayang MP Mr William Leong raising a point during the session.

27 BUMIPUTERA CONTRACTS AWARDED

By Amalina Ghazali

MASS Rapid Transit Corporation Sdn Bhd (MRT Corp) held its first balloting session for 2015 on 11 May 2015 which saw 27 contracts for the MRT Sungai Buloh-Kajang Line awarded to Bumiputera contractors from Grade G1 to Grade G4.

The balloting session, which was also the first under MRT Corp Chief Executive Officer Dato' Sri Shahril Mokhtar, was held at the Taman Tun Dr Ismail Community Centre.

The total value of contracts awarded was RM11 million. The contracts were awarded by the main contractors for the MRT Project.

Of the 27 contracts, eight were for contractors under Grade G1, 11 for Grade G2 contractors, five for Grade G3 contractors and three for Grade G4 contractors.

Contractors under Grade G1 are eligible for contracts up to the value of RM200,000, while those in Grade G2 are eligible for contracts between RM 200,001 and RM 500,000. Grade G3 contractors are eligible for contracts between RM500,001 and RM1 million while

those in Grade G4 are eligible for contracts between RM1,000,001 and RM3 million.

The grades are determined by the Construction Industry Development Board of Malaysia (CIDB).

In his speech at the balloting session, Shahril said he was happy that the overall level of Bumiputera participation in the MRT Project was beyond the target set by the Government.

"The MRT Project has awarded 48% of the value of contracts to Bumiputera contractors. This is beyond the target of 43% set by the Government," he said.

He also pointed out that many Bumiputera contractors who had earlier been awarded contracts via the MRT Project's Bumiputera Agenda platform have now managed to get new contracts from their Work Package Contractors directly.

"This is proof that participation in the MRT Project's Bumiputera Agenda opens doors to further opportunities in the future," he said.



SUCCESSFUL • MRT Corp CEO Dato' Sri Shahril Mokhtar poses for a photograph with the successful Bumiputera contractors.



PICKING THE WINNER • Persatuan Kontraktor Melayu Malaysia President Dato' Mokhtar Samad picking a ballot.



WAITING IN LINE • Contractors registering before the balloting session.

ELEVATED STATIONS TAKING SHAPE

By Leong Shen-Li

THE elevated MRT stations are probably the most visible feature of the MRT Sungai Buloh-Kajang Line which is currently under construction.

The majority of the 24 elevated stations are located either beside or above major roads, making them unmissable. And due to this high level of visibility, there has been considerable interest from members of the public of their construction progress.

The standard elevated station has two levels – the concourse and the platform level. The concourse level will be where users buy their tickets and enter via fare-gates into the paid area of the station.

The platform level, which is above the concourse, is where users board and disembark from trains.

Currently, the stations are at various stages of construction. Most of them are having their roofs installed. Their external architectural works such as plastering, painting and metal cladding installation are also in progress.

As the roofs are installed above the open platforms, the station's *wakaf* design, based on the traditional Malay open-sided pavilion used by travellers for resting, becomes very apparent.

Most stations are also having their entrances constructed. These entrances will house lifts and escalators which will enable users to access the elevated stations from ground level.

While these external works can be readily seen by the public, a lot of work is also taking place inside the stations.

Besides catering to the needs of users, stations also house a lot of equipment which are critical for the operations of the MRT service. They include equipment for signalling, train control, telecommunications, station control, automatic fare collection and many others.

These equipment are placed in rooms located generally at the two ends of the stations where access is not available to the general public. Some stations have as many as 20 rooms for equipment. Once the construction of these rooms are completed, they are handed over by the Civil Works contractors to the Systems Works contractors for the equipment to be installed.



■ ALMOST COMPLETED • Aerial view of the Taman Midah Station.

There are also “front of house” facilities for users which have to be installed. They include the customer service counters, ticket vending machines, fare gates, lifts, escalators and prayer room facilities. And don't forget the toilets.

Significant work also has to be done at ground level before these stations can be used. Roads leading to entrances, park and ride facilities, bus and taxi stops and private vehicle lay-bys have to be built. Covered and lit walkways have also got to be constructed for pedestrians.

The final touch to these stations will be the landscaping to transform them to become pleasant facilities for users.

Work to complete the above is progressing at full swing to ensure that the 12 stations on the northern elevated section between Sungai Buloh and Semantan Stations are ready to greet their first customers by 31 December 2016 when Phase I becomes operational.



■ WORK IN PROGRESS • The roof truss being erected before the covering is installed at the Kwasa Sentral Station.



■ ATTRACTIVE • Aluminium cladding being installed at the Kota Damansara Station.



■ FULL SWING • Internal works include installing various fixtures, including casing for cabling.



■ MOVING IN • Equipment being installed in station rooms.

HAPPENINGS



■ IN THE TRAIN • Representatives from financial institutions pose for a picture inside the MRT train during a visit to the Sungai Buloh Depot on 11 June 2015. The visit was organised for Danalinfra Nasional Bhd to introduce the MRT Project to bankers.



■ TUNNEL TOUR • On 6 May 2015, a delegation from PEMANDU, led by then Director of Urban Public Transport NKRA Encik Mohd Azharuddin Mat Sah, visited the Cochrane Station and tunnel.



■ KICK-OFF • MRT Corp organised a briefing session to contractors as it opened submissions for tender pre-qualification for the MRT Sungai Buloh-Serdang-Putrajaya Line elevated civil works on 4 June 2015.



■ HISTORIC MOMENT • SMH Rail Sdn Bhd received certification from Siemens AG for its train assembly plant in Rasa, Hulu Selangor on 13 April 2015. SMH Rail is a member of the consortium supplying the MRT Sungai Buloh –Kajang Line trains.



■ IFTAR WITH THE MEDIA • On 30 June 2015, MRT Corp hosted a Buka Puasa for members of the media. Over 100 people turned up for the event.



■ EDUCATIONAL • Civil Engineering students from the Tun Hussein Onn University in Batu Pahat, Johor, visited the MRT Information Centre to learn more about the MRT Project on 4 June 2015.

TUNNELLING COMPLETED

By Leong Shen-Li

IN the morning of 11 April 2015, the first pieces of concrete from Pasar Seni MRT Station's thick diaphragm wall started chipping and falling off, revealing the rotating cutter head of the Pudu 1 Tunnel Boring Machine (TBM).

The small eager crowd, mostly staff from Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) and MMC Gamuda KVMRT (T) Sdn Bhd, the Underground Works Contractor for the MRT Sungai Buloh-Kajang Line, started to get excited.

And after an hour or so, the entire wall had been "punctured" through. Once the rotating cutter head stopped, the engineers operating the TBM squeezed through the openings of the cutter head and waved at the cheering crowd.

This moment marked the end of 22 months of successful tunnel excavation for the 9.5km underground section of the MRT Sungai Buloh-Kajang Line.

After excavating deep beneath the busiest parts of Kuala Lumpur, part of it through some of the most challenging geological conditions, the MGKT Tunnelling team had literally arrived at the end of the tunnel.

What was more interesting was that this TBM was the very first to be launched for the Project. Then known as Cochrane 1, it was launched from the Cochrane Launch Shaft by Prime Minister Dato' Sri Mohd Najib Tun Abdul Razak on 30 May 2013.

It had excavated a total of 4.4km, the longest stretch by a single TBM of the eight used for the MRT Sungai Buloh-Kajang Line.

Starting from the Cochrane Launch Shaft, the TBM excavated and constructed the tunnel beneath Jalan Cochrane, Jalan Tun Razak and the SMART tunnels, Jalan Bukit Bintang, Jalan Pudu, Jalan Hang Tuah and Jalan Sultan until it reached the Pasar Seni MRT Station site.

The TBM also excavated through the Tun Razak Exchange and Bukit Bintang Station boxes as these two underground stations had not yet been dug to the tunnel level at that time. At the Merdeka Station, the TBM broke through its diaphragm wall and was relaunched to excavate the final 685m stretch between that station and Pasar Seni Station.

More significantly, the TBM successfully managed the transition from the Kuala Lumpur Limestone Formation - its extreme karstic characteristic

deemed extremely challenging to tunnelling engineers - to the more consistent Kenny Hills Formation.

The TBM was the first ever Variable Density TBM to be used in the world.

The design was a joint effort of the MRT Sungai Buloh-Kajang Line Underground Works Contractor MMC Gamuda KVMRT (T) Sdn Bhd, and world renowned TBM manufacturer Herrenknecht AG of Germany.

MRT Corp Project Director Mr Marcus Karakashian said it was a great achievement that tunnelling for the MRT Sungai Buloh-Kajang Line had been completed within two years.

"More importantly, tunnelling works did not face or cause any major problems despite the challenging geology in Kuala Lumpur," he said.

MMC Gamuda Deputy Project Director Ubull Din Om said the achievement was the result of the efforts of the team experts and skilled workers which the company had built up over the years.

"We are glad that this investment has produced admirable results," he said.

To celebrate the completion of tunnelling, an event was held on 21 April 2015 at the Pasar Seni MRT Station site. The Guest of Honour for the event was then Kuala Lumpur Mayor Datuk Seri Ahmad Phesal Talib.

During the event, a video of all the breakthroughs by the eight TBMs was shown. A time-lapse video of the construction of the underground stations of the MRT Sungai Buloh-Kajang Line was also shown.

Ahmad Phesal was brought to the platform level of the station where they were shown the Pudu 1 TBM which at that time was being dismantled after the final breakthrough.

What stole the show for the entire event was the unveiling of a mock train inside one of the completed tunnels which gave a realistic visualisation of how the train will look like inside the tunnel during operations.

Mementos were also presented to MMC Corporation Bhd Group Managing Director Dato' Seri Che Khalib Mohamad Noh and Gamuda Bhd Executive Director Dato' Paul Ha as representatives for the Underground Works Contractor for the successful completion of tunnelling works.



■ **END OF THE TUNNEL** • Tunnelling engineers celebrate the completion of all tunnelling works for the MRT Sungai Buloh-Kajang Line after the final breakthrough by the Pudu 1 Tunnel Boring Machine.



■ **JOB DONE** • MMC Gamuda KVMRT (T) Sdn Bhd Project Director Mr Satpal Bhogal (left) and Head of Tunnelling Mr Ng Hau Wei (right) celebrate after greeting Tunnel Crew Mr Shyam Bahadur Shahi (second from left) and Mr Sures Kumar Narayanan who had just come out from the TBM after the breakthrough.



■ **REALISTIC** • Kuala Lumpur Mayor Datuk Seri Ahmad Phesal Talib (left) and MRT Corp CEO Dato' Sri Shahril Mokhtar having a look at the tunnel and mock train.



■ **HISTORY RECORDED** • MRT Corp CEO Dato' Sri Shahril Mokhtar (second from right) together with other guests give their thumbs up after Kuala Lumpur Mayor Datuk Seri Ahmad Phesal Talib (middle) signed the commemoration plaque.



■ **FAST FORWARD** • The guests watching a video on the progress of the MRT Project.

